



# COHESION AND COMPETITIVENESS OF REGIONS IN LITHUANIA <sup>1\*</sup>

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**Abstract.** The growing interest has emerged in the 'regional foundations' of national competitiveness, and with developing new forms of regionally-based policy interventions to help improve the competitiveness of every region and major city, and hence the national economy as a whole.

In fact, a still small but rapidly growing literature now exists on the topic of 'territorial competitiveness'. However, this new focus on 'place competitiveness' raises a host of questions as to what, precisely, is meant by the competitiveness of regions, cities and localities. First findings on the evaluation of regionally-based national policy interventions, their impact on territorial cohesion and resulting comparative advantages of regions of Lithuania are analyzed in this paper. The findings indicate a higher investment in infrastructure than in the knowledge economy development, also a faster development in already strong areas of the country. At the same time there appears to exist a tendency towards further agglomeration of high-income economic activities. This signals that the growth generated by the cohesion support might lead to widening regional disparities. For least-developed regions these interventions should help to consolidate local resources and facilitate efforts to build up key capital factors that will help to guarantee their future competitive success, for more-developed regions and big towns of Lithuania are likely in need to employ a wider range of different interventions addressing specific market failures that hold back their performance and competitiveness.

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### I. Introduction

Recent years have seen a surge of academic and policy attention devoted to the notion of 'competitiveness': nations, regions and cities, we are told, have no option but to strive to be competitive in order to survive in the new global marketplace and the 'new competition' being forged by the new information or knowledge driven economy (Best, 1990, 1998). Policy-makers at all levels have been swept up in this competitiveness fever. Thus the importance of competitiveness has been a recurring theme in OECD assessments of the advanced economies. Similarly, the European Commission has become much agitated by what it sees as the inferior competitiveness of the European Union, and has set as one of its goals to make EU the most dynamic economy of the world by 2010. Likewise, the Lithuania government has placed the need to boost national competitiveness at the centre of its policy agenda.

This concern with competitiveness has quickly spread to regional, urban and local policy discourse. Growing interest has emerged in the 'regional foundations' of national competitiveness, and with

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developing new forms of regionally-based policy interventions to help improve the competitiveness of every region and major city, and hence the national economy as a whole. With globalization, city and region economies increasingly find themselves competing with each other for resources, such as investment, skilled labour, markets and technological infrastructure, as well as for markets. Without effective co-ordination of their policies, devolution to cities and regions could lead to the further development of zero-sum game policies or territorial competition, for instance through competitive bidding or incentives wars. In each case, interregional co-ordination will be needed to ensure that each region's actions and plans harmonize with the wider interests of the national economy as a whole.

The purpose of the paper is to survey the 'regional foundations' of national competitiveness, and new forms of regionally-based policy interventions. The objectives of the paper are: an analysis of the territorial cohesion, and resulting comparative advantages of regions of Lithuania, and issues raising an efficiency/equity of regions that need to be done. The present analysis proves a tendency of growth of the regional disparities in Lithuania. The findings indicate a higher investment in traditional infrastructure than in human capital and the knowledge economy development, and a faster development in already strong areas of the country. An analysis shows clearly a tendency towards further agglomeration of highincome economic activities. The success factors for least-developed and more-developed regions are presented in the paper.

### 2. Competitiveness of Regions

Krugman raises three points of opposition to the idea of national competitiveness (1996a, 1996b). In the first place, he argues that it is misleading and incorrect to make an analogy between a nation and a firm; whereas, for example, an unsuccessful firm will ultimately go out of business, there is no equivalent 'bottom line' for a nation. Second, whereas firms can be seen to compete for market share, and one firm's success will often be at the expense of another, the success of one country creates rather than destroys opportunities for others, and trade between nations is well known not to be a 'zero-sum' game. Third, if competitiveness has any meaning, then it is simply another way of saying productivity that growth in national living standards is essentially determined by the growth rate of productivity. Michael Porter, who is one of the most influential writers on 'competitive advantage' - of firm, industries, nations and regions

and cities - also suggests that the best measure of competitiveness is productivity.

This is not to suggest that the export performance of regions is not important: on the contrary, the comparative advantage of a region's export sectors is still key to its overall growth and prosperity. Competition between regions (both within and between nations) may exclude a region from an industry in which it could have established a comparative advantage, or drive a region from an industry in which comparative advantage could have been maintained (especially bearing in mind that regions neither have recourse to currency devaluation, nor possess the price-wage flexibility, that might alleviate competitive disadvantage in the short run). But the basic point is that regional competitive advantage is both absolute and comparative in nature, and that productivity is not only important in influencing the comparative advantage of a region's export sectors, but is important across the whole range of its industries and services, not just to keep up with external competitors.

### 3. Convergence of Regions

The question whether incomes are converging across regional economies has long attracted the attention of economists and decision makers. On the one hand, there is a widespread perception that persistent disparities in aggregate growth rates have led to sizable differences in welfare not only across countries but also within them. On the other hand, no common answer from an ample body of empirical research on the subject has been reached as to whether, and under which conditions, convergence actually takes place.

Convergence in inter-regional per capita income within the traditional neoclassical setting can also be reinforced by trade relations rather than factor mobility. Even in the absence of factor mobility, progressive equalization in commodity prices and specialization of regional productive structures according to relative factor abundance result from inter-regional trade, thus leading to factor price equalization (the traditional Samuelson factor price trade equalization theorem). Moreover, in the presence of disparities in regional technological attainment, inter-regional trade can promote technological diffusion when technological progress is incorporated in traded goods, thus providing yet another possibility for poorer economies to converge with richer ones (Barro and Sala-i-Martin, 1995).

The attempt to explain regional disparities has covered much ground in its search for empirical factors which could provide a concrete basis for understanding why some regions are wealthy and the other poor (Nanetti, 1996). The initial variable used to account for differing rates of success among regions has been their level of physical infrastructure, which allows local producers to import the vital factors of production and subsequently export their products to mass markets. Thus, for regions to stand a chance of competing in an international market they must possess a certain minimal infrastructure.

A second variable which used to attract a lot of attention for explaining development of regions was the role of industrialization in peripheral areas. Instead, industrialized local economies have the physical and human resources to keep evolving with the change in production technology and producing the goods demanded by shifting tastes and expanding markets. An industrialization factor encompasses also the processes of localized "technological spillovers" that is, the fact that enterprises located in the same region benefit, through social interaction, from a higher level of technological performance (Mačys d, 2005).

The third factor which can account for regional disparities points to the structure of ownership of vital local economic resources. When decisions are made by outsiders, the commitment to maintain local well-being is lower, and primary objective tends to be the extensive exploitation of local physical and human resources and achieve quick profits. Dependence on external sources of capital is seen as undermining the prospects for mobilizing local forms of endogenous development and laying the basis for sustainable growth.

The fourth approach looks at the local presence of social capital. This factor emphasizes the role of local civic values in providing a common set of social rules and social control to regulate behaviour in civil society as well as in the economy. The argument here is that where these civic values are well diffused it is easier to engage in collective action for achievement of the collective good, such as, for instance, economic growth and social well-being. Where these values do not exist, the pursuit of the collective good is much more difficult to organize, and individual ends take over the collective ones (Mačys b, 2005).

## 4. Present Local Development Disparities in Lithuania

Lithuania is one of the most rapidly economically growing countries among new members of EU, but the economic – social disparities between its regions are striking. Local development disparities in Lithuania, expressed as gaps in gross domestic product per capita, may be treated as gaps between urban and rural areas, which may be partly explained by a difference in the field of urbanization level and development of infrastructure and service network. Due to these reasons, urban municipalities have more favourable conditions for economic and social development than those in rural areas. Disparities may also be conceived as consequences of economic restructuring that has exerted the strongest impact on the regions with small-scale diversification of the economic structure.

Local development disparities may appear in different ways. The population, economic infrastructure and economic activities are concentrated in the major centres, i.e. Vilnius, Klaipeda, Kaunas cities and so on. These cities are distinguished by a higherlevel economic infrastructure (first of all, transport and communication infrastructure), better-developed service sector, higher return rate of investments and skilled labour force. The geographical location of these cities is one of the main factors determining GDP, retail trade activities as well as small and medium-sized businesses in the counties. Vilnius and Klaipeda are major growth centres of Lithuania (Mačys a, 2006). Industries with strong economies of scale, belonging to sectors with a high profit margin were attracted to cities where other enterprises (both customers and suppliers) were already installed. In such cities a cumulative process has been established, since the more a given city has been able to attract enterprises of one type, the more it has attracted others. This cumulative process, as it was noticed by R. Martin (2000), has meant a high level of specialization in regions with a heavy concentration of industries with high profit margins and wages as compared with regions that are able to attract only firms with low profit and wages. The big cities been specialize in high-technology goods, whereas rural regions - in agriculture and backward, low-technology goods. That process has started and has became self-maintaining and self-reinforcing.

On the other hand, there is a group of mostly rural regions in eastern, southern and northern parts of Lithuania with the least developed economies – Tauragė, Marijampolė, Šiauliai and Alytus. These Lithuanian regions possess rather confined service sector and industrial enterprises. Border regions are in a particularly unfavourable situation due to the concentration of economic activities in the centres (Mačys, 2004). Economical infrastructure required for interconnection of central cities and regional areas is not sufficiently developed. Private business is poorly developed in the backward regions. The fact that fast economic growth Lithuania is accompanied by widening regional disparities makes one think that the trade-off between equity and spatial efficiency has a place of pride.

### 5. Gini Coefficient Analysis

If economic potential is measured not in terms of the size of economies but of value of the goods and services produced per resident, clear hierarchies emerge as Figures 1-4 show. There are three further qualifications that need to be made before the GDP indicator is used. First, GDP is a measure of the output of the market and public sectors. It excludes all forms of self-provisioning, informal work and most voluntary work. Second, GDP is an indicator not of welfare but of the resources which can be used to meet human needs. Third, the economic indicators will be presented in the form of Gini coefficients. The Gini coefficient is a measure of inequality of distribution. It is defined as a ratio with values between 0 and 1: the numerator is the area between the Lorenz curve of the distribution and the uniform (perfect) distribution line; the denominator is the area under the uniform distribution line. The Gini coefficient is often used as an income inequality metric. Here, 0 corresponds to perfect income equality (i.e. everyone has the same income) and 1 corresponds to perfect income inequality (i.e. one person has all the income, while everyone else has zero income). The Gini coefficient can also be used to measure wealth inequality. This use requires that no one has a negative net wealth.

GDP per head by regions shows the relative input of regions when creating country GDP, because each region differs by resident quantity, number of hired people, etc. Also, it shows competitiveness of the region. According to the data provided by the Department of Statistics, GDP/res. in Alytus, Marijampole and Taurage counties were less than 75 percent of the country average (accordingly 71.1, 65.1 and 55%). Following the methodology established by EU Commission, those regions where GDP per capita average is less than 75 percent of the country, are considered as depressed regions. EU Council Regulation No. 1260/99 describes such regions as backward regions requiring efficient support. The GDP per head of two counties - Klaipeda and Vilnius - had exceeded the country average (accordingly 102.9 and 144.3%). The Gini coefficient has increased every year (5). During the 1995–2004 period Gini coefficient has increased from 0,079 to 0,143, and it means that regional disparities have increased (Janušauskaitė, 2006).

Figure 1. Changes in Gini coefficient of GDP per head in Lithuania





Differences in GDP per capita can be divided into two groups: first, differences in productivity which themselves reflect differences in physical productivity, prices and earnings, and second, differences in the share of the active population in employment. Number of employed people is closely related to the unemployment level in regions. Like the decrease of unemployment level during the period of 1998 - 2001, employment level decreased from 62.3% to 57.2%, too. One may observe the decrease of employment in some regions (except Kaunas County - employment level increased from 57.2% to 57.4% during 2000 - 2001, Taurage County - employment level increased from 63% to 63.7% during 1999 – 2000, Utena County - employment level increased from 54.9% to 57.4% during 2000 – 2001).

Figure 2. Employment level in the counties of Lithuania, 1998–2005. Source: [Janusauskaite, 2006]



Maximum decrease of employment level has been fixed in Marijampolė County -12% (54.4% in 2001), as well in Utena County -9.9% (57.4% in 2001). Increase of employment level has been registered during 2002 -2005. Employment level in Lithuania increased from 59.2% to 62.6%. The marked increase has been in Alytus County (during the analyzed period it increased from 59.6% to 62.6%), Vilnius County (employment level increased from 59.9% to 65.2%) and in Panevėžys region decrease of employment level was registered – from 60.9% to 59.6%). It should be mentioned that during the analyzed period employment level in Tauragė region was also much higher than average in Lithuania.

### 6. Location Quotient Analysis

The location quotient (LQ) analyses the local distribution of employment more strictly. This quotient defines the share of the active population in employment and the region's specialization more specifically. The industrial composition of a local economy may be better understood by comparing the local industrial structure with other cities or with the country as a whole than by examining a local economy in isolation. The employment location is the ratio of the percentage of regional employment in a particular sector to the comparable percentage in a benchmark area. The country is usually the benchmark area. The method is used to estimate basic economical sectors of each region, i.e. sectorial specialization (Mačys c, 2005). Accordingly, the location quotient for sector *i* is expressed as

$$LQ_{i} = \frac{\underbrace{e_{i}}_{e_{t}^{i}}}{\underbrace{E_{i}}_{t}}$$

 $e_i$  – local employment in *i* sector, *t* year;

 $e_t$  – total local employment, *t* year;

 $E_i$  – national employment in *i* sector, *t* year;

 $E_t$  – total national employment, *t* year.

Quotient can vary among regions due to differences in consumption and production. The term LQ = 1 for a particular industry sector means that a region has the same percentage of employment in that industry as found nationally. The term LQ < 1implies that the area has a smaller than proportionate share of employment in a particular industry, whereas the term LQ > 1 implies a grater than proportionate concentration of employment. All employment above the level for the benchmark location quotient is considered as export sector. Although location quotients' method is an imperfect tool for describing a local economy and estimating exports, they are widely used because they are an inexpensive technique, reflect indirect imports, and apply to both goods and services.

Table 1. Regional disparities in Location Quotient in 1995–2003.

Counties Sector	Agricul- ture	Const- ruction	Industry	Servi- ces
Alytus	0,98	1	1,26	0,92
Kaunas	0,74	1,1	1,1	1,03
Klaipėda	0,85	0,94	0,96	1,21
Mari- jampolė	1,94	0,67	0,83	0,81
Panevėžys	1,3	0,72	1,13	0,89
Šiauliai	1,54	0,92	0,8	0,92
Tauragė	2,58	0,63	0,76	0,69
Telšiai	1,5	1,22	1,19	0,74
Utena	1,26	1	1,15	0,85
Vilnius	0,39	1,19	0,95	1,19

Source: [Janušauskaitė, 2006]

According the data provided in Table 1, one may see that regional specialization of various activities is unequal. The main economic specialization in the counties of Marijampolė, Panevėžys, Šiauliai, Taurage, Telšiai and Utena is agriculture. This sector of economic specialization does not induce the growth of GDP. In the counties of Marijampole and Taurage we may observe a growth tendency in agricultural sector, and the marked transition toward other sectors of economy is observed in the regions of Telšiai and Kaunas. The main economic specialization is construction industry in the Counties of Alytus, Kaunas, Telšiai, Utena and Vilnius. By 2003 the construction industry in Klaipėda and Vilnius counties moved on. Industrial sector is mainly developed in the counties of Alytus, Kaunas, Panevėžys, Telšiai and Utena. During the analysed period industrial specialization started to decline in the counties of Alytus (2002), Kaunas (2004), Panevėžys (2005) and Vilnius (2003). The industrial specialization has moved on in all other regions. It means that regions are working on to widen differences between one another. Service sector is popular in the strongly industrialized Counties of Vilnius, Kaunas and Klaipėda. The greatest concentration of services is observed in the central cities of three Counties: Vilnius, Kaunas and Klaipėda. There the service sector is dominant: trading, hotel and restaurant, real estate and other services.

## 7. Foreign Direct and Material Investments

The issue of competitive bidding is particularly visible in attraction of foreign direct investment, where it is often argued that competition between cities and regions for a limited volume of investment projects has inflated the subsidy cost of inward investment attraction. Such competition for inward investment has become an increasingly important issue as the scale of international investment has increased with globalization. Fig. 3 shows that Gini coefficient started to decrease by 2002. The reason of such diminution could be a new data collection system changed by the Department of Statistics by 2002. At present FDI data are presented according to the investment area and previously it was reported by the place of enterprise registration. Notwithstanding this, Gini coefficient grew from 0.621 up to 0.693 during 1996 – 2005 year period.

The same tendency is observed when comparing Gini coefficient to FDI per head, the only difference is that Gini coefficient increased by 2003 and FDI decreased by 2004. FDI per head factor had decreased from 0.519 to 0.609 during the period of 1997 – 2005. Such fluctuations show the uneven development of regions.

Figure 3. Gini coefficient of Foreign Direct Investment change per capita during 1997–2005.



Source: [Janušauskaitė, 2006]

Growth of FDI per capita is observed almost in all regions during the analysed period. Only in some regions and in certain years decrease of the analysed factor could be observed but not considerably. FDI per capita had increased greatly in Telšiai region during 2004 - 2005 period (from 6 619 to 21 797 thousand LT). FDI per head factor concentration in Vilnius region is equally high, and the largest part goes to Vilnius city 24 064 thousand LT (country average - 7 022 thousand LT). During the analysed period the lowest FDI per capita has been observed in Marijampole region (FDI per head decreased from 604 to 548 thousand LT) and in Taurage region (increased from 168 to 208 thousand LT). It could be stated that largest investments are concentrated in the biggest Lithuanian cities: Vilnius, Klaipėda and Kaunas. In Lithuania enterprises are mostly concentrated in five biggest cities, thus increasing region attractiveness to investments. The larger the industrial or service centre is, the more investments come. Intensive territorial concentration is more characteristic to service sector than to industry sector. So, having analysed the distribution of FDI and FDI per capita we may draw a conclusion that differences between the regions are increasing. This process predetermines the level of resident life quality and other factors and, once again, demonstrates the increase of differences between the regions in Lithuania.

By the way, improvement of all factors has been observed in the Lithuanian regions by 2002. Economic activity in the outlying districts started to increase after the Russian crisis. The interregional trade started to recover, increased demand for long-lasting material investment and GDP indexes in the regions. Improvement of regional status is observed after the Russian crisis while analyzing foreign direct investment data. Foreign direct investments determine an economic attractiveness of the region to foreign capital. The capability to attract more proper means to the certain territory may be compensated and reimbursed. Thus, extra work places are created in the region, labour productivity increases due to introduced high technologies, more income is generated and region social indicators improve. Some cases witness about the conscious stopping of FDI coming in to Lithuania because foreign capital could over compete local and, all the same, move out to the foreign country. However, in due course of time, the advantage of FDI has been noticed, but FDI flows are still too poor in regions and in the country, too.

Per capita FDI does not reach 5000 LT per year in many regions of Lithuania. This factor does not reach even 1000 LT per year in regions of Marijampolė, Šiauliai and Tauragė. According to this factor Vilnius region is considerably ahead from other regions, and only after privatisation of "Mažeikių nafta", by 2004, FDI amount increased in Telšiai region where FDI per capita exceeded FDI per capita in Vilnius region, by 2005. One may come to a conclusion that FDI growth in Lithuania was very slow, except in Vilnius region, where it has considerably increased, especially by 2003. By the end of the period the sudden increase of per capita FDI has been observed in Telšiai region.

The material investment (MI) – is a very wide concept which describes investments into buildings, equipment, machinery, premise renovation, etc.

Figure 4. Gini coefficient of material investment per head in the regions of Lithuania.



Source: [Janusauskaite, 2006]

Fig. 4 shows that MI per resident Gini coefficient started to decrease by 2002. It could be caused by the change of MI data collection statistics made by the Department of Statistics: by 2002 MI data is presented in accordance to investment place, and earlier data was presented in accordance with the place of registration of an enterprise. Approximately 71% of material investments are concentrated in the regions of Vilnius, Kaunas and Klaipėda (accordingly 39%, 17% and 15%).

### 8. Regional Efficiency and Equity

Disparities in per capita income between the regions of the Lithuania are gradually increasing. While part of the phenomenon of concentration and regional inequality is due to processes of localized "technological spillovers" already discussed, the recommendations for public policies are very different. It is no longer a matter of reducing transaction costs on trade in goods among regions but of reducing transaction costs on the trading of "ideas". This involves a change in priorities: instead of financing motorways with positive Keynesian effects, it will be necessary to promote technological convergence among regions, which will involve public programs for telecommunication, the Internet, and training of human capital as well as policies aimed at increasing the productivity of poor regions and facilitating the transportation of people rather than goods? Such policies make it possible to achieve gains in both regional efficiency and regional equity, in contrast to the regional policies financing goods transportation infrastructure or transfers to the poor regions (Mačys d, 2005).

Technology is a key element in regional growth, and high-tech firms both are dynamic and offer highquality, high-wage jobs for workers. Considerable efforts have been made in many regions to improve innovativeness and to help indigenous firms to upgrade their technology. These efforts have included the setting-up of innovation centres and technology transfer agencies. Apart from the technology transfer agencies and investment grants which allow firms to buy in latest process innovations, other distinctive initiatives include science parks and techno poles, venture capital initiatives and improved infrastructure provision. Public expenditures are used to create improved environmental and urban living conditions in order to encourage technology-based industries.

### 9. Agglomeration Economy Issues

Policymakers in city and region governments and developing agencies should be clear about the objectives of the interventions they develop. Essentially, these objectives should be two-fold. Firstly, there is a need to underpin city and region economic competitiveness in the global economy. Secondly, it is important to combat the social exclusion that can be associated with globalization. Cities and regions need policies in both of these domains (Mačys b, 2005).

In terms of underpinning economic competitiveness of regions, there are a number of key issues to address. In terms of neoclassical economic theory, city and region competitiveness can be thought of as deepening on the availability of three key factors of production - financial and physical capital, labour and human capital and land, other resources - and how productively these factors can be employed. The productivity of factors is in turn influenced by considerations like the mobility of labour and capital, the extent of external economies including local networks and associations between firms and institutions and environment for innovation. This implies that policymakers need to concentrate both on expanding the availability of the factors and working on the range of influences that affect the productivity with which they are employed. The role of cities and regions in supporting entrepreneurship and human capital development should be stressed. Both have a pervasive impact on factor productivity and help attract and build financial capital. Measures in these areas can help create a healthy local environment for competition in the global economy although other potential measures such as support for innovation should not be neglected.

New products and processes spread from the point of innovation in three distinct ways. First, there is a tendency for consumer-oriented innovations to spread in a radial pattern from the source of the innovation outward. Movement of an idea from the central city to suburban areas is an example of the radial diffusion pattern. Innovations that depend on personal, no business contacts are likely to have a strong tendency to spread in a radial manner. Second, innovations move among cities of roughly equal size. For instance, an innovation may appear in Vilnius and Kaunas approximately at the same time. The similarity of environments including similar supporting services to those that stimulated original initial innovations in metropolitan areas makes replication in similar metropolitan areas more likely. Third, the diffusion of innovations from major metropolitan areas to smaller places in the major area's sphere of influence can be explained by business organization patterns. Thus the corporate headquarters will tend to be the location of a company's communication centre. If the innovation is successful, it may filter down to regional offices and later to local offices. Distribution channels for consumer products and information channels may also follow business organizations.

The diffusion process from metropolitan areas to smaller places, coupled with tendency for products to grow rapidly in the early stages of their life cycle, has been termed industrial filtering. Metropolitan areas tend to be the site of production early in the life cycle of a product or process. After a process is better understood and is broken into routine steps or after a market has been established for a product, a shift in the site of production to smaller towns often occurs. Firms may relocate to take advantage of lower costs in smaller, less urban places. The large metropolitan areas have a higher proportion of fastgrowth activities, but those activities spin off to smaller places. Accordingly, metropolitan areas will tend to lose a portion of their economic base to lower-cost cities.

Large cities may require a more highly skilled labour force because products in early stages of development involve no routine production. The different skill requirements may account for the persistence of higher incomes in urban areas. Strategic investments in education, training, and quality environment may help metropolitan areas attract and develop the skilled labour force needed for no routine operations. Larger cities may also explore ways to maintain activities that originate there and hence slow the filtering process. Conversely, smaller cities may consider how to speed up the filtering process so they can capture industries early in the product life cycle. Recently, some policy analysts have questioned whether major urban areas can maintain their leadership in innovation if the site of production becomes too remote. Underlying this issue is the concern that, if research becomes too distant from shop floors, researchers will loose their sense of purpose. They concluded that metropolitan regions can retain their eminence as industrial research and development centres even as the manufacturing activities decline (Mačys d, 2005).

### **10. Success Factors**

Human capital is an essential determinant of local economic growth and competitiveness in the globalizing economy, but because companies and individuals tend to underinvest in training, public interventions are needed. Recognition of the need to invest in human capital policies is often linked to the idea that we are entering a knowledge economy in which knowledge is becoming an essential factor of production. This means that work and learning are becoming increasingly inter-related as skill levels have to be raised, updated more frequently and new types of skills developed. Our education and training systems have to adjust to these new conditions, based on the notion of a lifelong learning. Systems of training and skill development need to adjust to take advantage of technology-assisted methods of education and distance-learning technologies, to involve new training suppliers from the private sector, to reduce old demarcation lines between vocational and academic training and to provide greater access to learning from workplace.

Can small regions expect to have much success developing their economies and compete successfully in globalizing economies? The answer depends on their ability to define their development goals broadly, establish reasonable targets, and implement policies which are appropriate to those goals and targets. Take technology as an example (Bradfield, 1998). A policy of development through appropriate technology would be concerned with more than the local labour force and its skills. It would develop the region's comparative advantage based on resources and the environment, both natural and social, in sense of culture, politics, and aspirations. What is the appropriate technology also depends on local needs. Relating technical change to a region's needs may nonetheless involve the importation of basic ideas from elsewhere. It may involve reviving local existing technologies and past practices which had been replaced by more modern techniques which ultimately prove unaffordable because of their import requirements or unanticipated side-effects. Of course, it may involve brand-new solutions.

By finding solutions to the region's problems, an appropriate technology strategy can meet needs directly but may also expand the local economy. Locally generated solutions are more likely to use locally produced inputs. Thus there will be linkages established which will stimulate the economy. Stimulation may come from export opportunities for the products, processes, or expertise developed. However, these are desirable side-effects and should not be primary focus policy. Nonetheless, what is appropriate should not be limited to technologies which deal only with local needs or are produced with labour-intensive techniques because of the high unemployment rate. It is also appropriate to rely on local skills and experience. The point is that policy should be flexible enough to support high ideas even though policy is not on high tech.

### Conclusions

First, liberal market was supposed to diminish and unify the uneven development of Lithuanian regions after the restoration of independence. However, the market had not unified the process but aggravated it even further. Some regions became "attractive" for investment and other - "non-attractive". The formation of public interventions to support the cohesion of regions started in Lithuania only in 1998. The present analysis proves the tendency of growing regional disparity in Lithuania. An analysis shows also a higher investment in traditional infrastructure than in human capital and the development of knowledge economy, and a faster development in already strong areas of the country. This signals that the growth generated by the cohesion support might lead to widening regional disparities.

Second, the cohesion support interventions should help to consolidate local resources and facilitate efforts to build-up for least-developed regions the local asset systems and political mobilization focused on institutions, socialization and social capital. More-developed regions and big towns of Lithuania are likely in need to employ a wider range of different interventions addressing specific market failures that hold back their performance and competitiveness.

Third, the success of the least-developed regions, in the presence of disparities in regional technological attainment, is related to the rise of dynamic and creative agglomeration, thus providing yet another possibility for poorer local economies to compete with richer ones.

### References

 Gardiner, B.; Martin, R.; Martin, P. Competitiveness, productivity and economic growth across the European regions, Reg. Studies Assoc., London, Jan. 2004.

- Baro R. J., Sala-i-Martin X. Economic growth, McGraw Hill. New York, 1995.
- 3. Best M., *The new competition*, Cambridge, Mass: Harvard Un. Press, 1990.
- Best M., The new competitive advantage: the renewal of American industry, Oxford: Oxford Un. Press, 2001.
- 5. Bradfield M. *Regional economics: analysis and policies in Canada*, Dalhousie Un., Canada, 1994.
- Janušauskaitė E. Divergence processes in Lithuania regions, Master thesis, supervisor G. Mačys. Vilnius: Mykolas Romeris Un., 2006.
- 7. Krugman, P. Pop internationalism, Cambridge, Mass: MIT Press, 1996a.
- Krugman, P. Making sense of the competitiveness debate, Oxford Rev. of Ec. Policy, 1996b, 12, p. 17– 35.
- Mačys, G. Regional economics, policy and governance in Lithuania, Mykolas Romeris Un., Vilnius, 2005, 2<sup>nd</sup> revised ed. 2006.
- Mačys, G. Economic globalization and local initiatives, in *World of Managers*, 2005, No. 7–8, p. 22– 31.
- Mačys, G.; Stungurienė, S. A macro econometric model of socio-economic development of regions in Lithuania and the questions of the model application in practice, in *Economics and management*, Šiauliai Un., 2005.
- 12. Mačys, G. Clusterization as the most promoting factor of regional development, in *Public policy and administration*, No.12, Vilnius: MRU, 2005.
- Mačys, G.; Christauskas, J.; Račkauskas A., Perspektywy wspolpracy regionow przygranicznych Litwy w ramach inicjatywy wspolnotowej INTERREG III A, in *Rozszerzenie Unii Europejskiej na wschod a rozwoj wspolpracy transgranicznej*, Uniwersytet w Bialystoku, Bialystok, 2004, p. 244–253.
- Mačys, G. Regional economic development: advantages and traps of technology, in: *Economics and Management* '99, KTU, 1999, p. 204–208.
- Martin, P. Public policies and economic geography, in *European integration, regional policy and growth,* ed. by Funk B., Pizzati L., WB, Washington DC, 2002.
- Martin, R. Institutional approaches in economic geography, in Shepard E.; Barns T. J., *A companion to economic geography*, Oxford: Blackwell, 2000, p. 77–94.
- Nanetti, R. Y. EU cohesion and territorial restructuring in the Member States, Cohesion policy and European integration: building multi-level governance, ed. by Hooghe L, Oxford Un. Press, 1996.
- Rowtorn, R. E. *The political economy of full employment in modern Britain*, The Kalecki memoral lecture, Un. of Oxford, 1999.
- 19. Tyson, L. Who's bashing whom? Trade conflicts in high-technology industries, Washington DC: Inst. for int. Ec., 1992.

#### LIETUVOS REGIONŲ SANGLAUDA IR KONKURENCINGUMAS

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Santrauka. Pastaruoju metu mokslininkai ir praktikai nemažai dėmesio skyrė valstybių, regionų ir miestų konkurencingumui. Mums, norintiems išgyventi veikiant naujai globalių rinkų ir naujosios informacinės (arba žinių) ekonomikos didėjančiai konkurencijai, buvo sakoma: lieka viena išeitis – būti konkurencingiems. Ši konkurencingumo karštligė įtraukė ir visų lygių politikus. Susirūpinimas konkurencingumu greitai išryškėjo ir diskusijose apie regionines, miestų ir vietos politikos priemones. Vis labiau plėtojant naujas regioninėmis iniciatyvomis grįstas viešosios politikos priemones, siekiant pagerinti kiekvieno regiono ar didelio miesto (o kartu ir visos nacionalinės ekonomikos) konkurencingumą vis daugiau dėmesio buvo skiriama regionų plėtra grįstam šalies konkurencingumui.

Spausdintų darbų teritorijos konkurencingumo klausimais vis dar mažai, bet sparčiai daugėja. Tačiau dėmesį sutelkus ties "vietos konkurencingumu" kyla daugybė pamatinių klausimų: kokia prasme mes kalbame apie regionų, miestų ar vietovių konkurencingumą, kokia prasme konkuruoja regionai ir miestai? Šie bei kiti regionų konkurencingumo klausimai ir aptariami straipsnyje.

Regionų plėtros procesuose ne mažiau svarbūs yra regionų ekonominės ir socialinės sanglaudos klausimai. Straipsnyje analizuojama, kiek regioninės politikos ir Europos Sąjungos struktūrinės paramos priemonės prisideda prie teritorinės sanglaudos ir tolesnių Lietuvos regionų konkurencinių pranašumų stiprinimo. Rezultatai rodo, kad didesnės investicijos skiriamos vietinei infrastruktūrai nei žmogiškajam kapitalui ir žinių ekonomikai vystyti. Greitesnė plėtra patebima jau ir taip sėkmingiau augančiuose regionuose. Tuo pat metu veikiant aglomeracijų ekonomikos procesams pastebima tolesnė didelių pajamų ekonominių veiklų koncentracija miestuose. Tai perspėjantis ženklas, kad tokiomis sąlygomis regionų sanglaudai skiriamos lėšos gali sukelti tolesnį regioninių skirtumų didėjimą.

Mažiau išvystytiems regionams regioninės politikos priemonės turi padėti sutelkti vietinius išteklius, sukurti svarbiausius infrastruktūros, žmogiškojo, socialinio bei fizinio kapitalo išteklius, kurie leistų užsitikrinti būsimus vietos konkurencinius pranašumus. Labiau išvystytiems Lietuvos regionams ir didiesiems miestams reikia panaudoti įvairesnių priemonių, šalinančių specifines rinkų deformacijas, sulaikančias jų dar spartesnį našumo bei konkurencingumo augimą. Daugiausia dėmesio ir toliau reikia skirti naujoms technologijoms ir inovacijoms. Jos vargingesnius šalies regionus pasiektų augančiais prekių bei paslaugų srautais. Tai jiems leistų sėkmingiau konkuruoti su turtingesniais regionais.

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